SUMMARY SHEET

(X) Draft ( ) Final Environmental Statement

Department of the Interior, Bureau of Land Management

1. Type of action: (X) Administrative ( ) Legislative

2. Brief description of action: To comply with provisions of Executive Order 11643 and with intent of protecting the public interest against violations by other parties, the Department is proposing amendments to Part 1720 of the Code of Federal Regulations. The proposed amendments would restrict the use of chemical toxicants on national resource lands.

   Exceptions will be made only if it is required to protect human life, health, or safety; to preserve a wildlife species threatened with extinction or likely soon to become so threatened; or to prevent substantial irretrievable damage to nationally significant natural resources. The Administrator of the Environmental Protection Agency will make the determination that the emergency cannot be dealt with except by the use of chemical toxicants. The proposal is national in scope, but largely affects national resource lands in the West.

3. Summary of environmental impact and adverse environmental effects: Adoption of the proposed regulations would result in more selective, humane and safer control of predators on public lands. This in turn greatly reduces danger to man and pets through accidental poisoning and reduces potential environmental degradation resulting from the use of poisons. While this action may be adverse to the marginal livestock operator, at least on a short term basis, it should not significantly affect the livestock industry dependent on public lands.

4. Alternatives considered: (1) Continued use of chemical toxicants; (2) Continue the use of selective poison; (3) Cancel E.O. 11643, and terminate Federal predatory animal damage control programs; and (4) Complete ban on the use of chemical toxicants.

5. COMMENTS HAVE BEEN REQUESTED FROM THE FOLLOWING:

   For Official Comment:

   Environmental Protection Agency
   Department of Agriculture
     Forest Service
     Soil Conservation Service

Department of the Interior
Bureau of Land Management
Bureau of Outdoor Recreation
National Park Service
Bureau of Indian Affairs
Bureau of Reclamation
Geological Survey
Department of Health, Education, and Welfare
Department of Defense

6. Date draft statement made available to CEQ:

DRAFT ENVIRONMENTAL IMPACT STATEMENT
PROPOSED REGULATIONS TO RESTRICT THE USE OF CHEMICAL TOXICANTS
ON NATIONAL RESOURCE LANDS

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Background

1. History

The use of chemical toxicants on national resource lands for any purpose including control of predators and rodents was virtually unrestricted until enactment of the National Environmental Policy Act in 1970 (Public Law 91-190). Although Federal and State laws were enacted to regulate the use of chemical toxicants dating back many years, there were certain Acts passed by Congress which authorized and encouraged the use of chemical toxicants on national resource lands. Until Rachel Carson's famous book, The Silent Spring, written in 1962, stirred public controversy on the effects of the insecticide DDT,[1/] there was little public attention paid to application of chemical toxicants for predator and rodent control on public lands.

The growing public concern on Federal programs of animal control involving chemical toxicants culminated in the issuance of Executive Order No. 11643 issued by the President on February 8, 1972, which restricted the use of chemical toxicants on public lands.

Following the National Environmental Policy Act in 1970 a Cabinet Subcommittee on Pesticides was set up in the Council of Environmental Quality to establish guidelines and standardize policy on the use of chemical toxicants. To comply with the President's committee, the Department of the Interior organized a Working Group on Pesticides to further implement

1/Carson, Rachel - The Silent Spring - Houghton Mifflin, Boston

the legislative and executive mandates. Consequently, this group reviews all projects proposed by agencies within the Department.

In addition, the Bureau of Land Management has a technical pesticide screening committee which reviews all BLM projects submitted by field offices involving the use of chemical toxicants. This includes chemicals for controlling rodents but does not apply to predators since that control work is accomplished by the Bureau of Sport Fisheries and Wildlife and those control projects are submitted directly by that agency to the Interior Working Group. Bureau of Land Management field personnel coordinates predator control program needs on designated areas of national resource lands prior to BSF&W's development of predator control projects.

A. Predatory Animal Control

Since man first domesticated animals he has been confronted with the problem of predatory animals preying on his stock. Man-predator conflicts arose in the United States during the early days of the first eastern settlements. The Massachusetts Legislature passed the first bounty law directed against predators in 1630.

The early settlers in the West, assisted by their hired hands, used steel traps and firearms to protect their livestock from predators. Large carnivores were shot whenever they were within firearm range and among most frontier settlers the maxim, the only good varmint is a dead one, prevailed. Many of the larger carnivore species such as bears, lions, and wolves were eliminated or greatly reduced in numbers. Some races of these predators became extinct and others are today threatened with extinction. The coyote alone survived the pressures of man and in some areas has adapted well to the land-use changes brought about by man.

In the later part of the 19th Century wolves and coyotes and to a lesser extent bears preyed upon the large numbers of cattle and sheep grazing unrestricted on the public land "Commons." The influential graziers of the Western States exerted increasing pressures on the Federal Government to provide assistance in reducing losses. This pressure culminated in a study by the Department of Agriculture's Bureau of Biological Survey during the period 1907 to 1914 on wolf and coyote populations. One product of this study was the issuance of published bulletins which gave detailed instructions on methods for controlling these predatory species.

The Department of Agriculture through the Forest Service began charging fees to the private grazier utilizing the national forest lands; this in turn prompted demands for assistance in controlling predators since a fee was now charged for forage which previously was free.

The first appropriation of Federal funds for predator control was made in 1915. A sum of $125,000.00 was allocated to the Bureau of Biological Survey for direct assistance in suppression of predatory animals.

World War I caused an increased demand for meat and other animal products and this demand added support to the pressures from the graziers for increased Federal funds for predator control. Federal appropriations gradually increased and provided the precedent for a sustained program that continues to exist today.

During roughly the same period of Federal intervention into predator control many State governments started predator control efforts funded with State funds. State funded efforts reached their highest level in the decade prior to World War II and then gradually declined although many Western States still maintain small scale control programs or contribute funds for animal control. During the period up to WWII populations of the larger carnivores i.e. wolves, grizzly bears and mountain lions were either exterminated or reduced to remnant local populations.

Prior to World War II, trapping, shooting, denning and the use of strychnine-treated baits were the major coyote control techniques. Strychnine is a toxic substance produced from the fruit of an East

Indian tree. It is toxic to all forms of wildlife and has been used to kill both mammals and birds. Use of this material for predator control involved the use of fat or meat baits placed on the ground or scattered from aircraft.

Thallium was in common use by the late twenties for control programs of field rodents, birds and predators. Use of this material was widespread until the late 1940's when sodium monofluoroacetate largely replaced it as a control chemical. Thallium sulfate, the most commonly used form of thallium for control work, is a heavy white powder which is toxic to all forms of animal life. Baits for predator control were prepared by dusting the chemical into cuts in a freshly butchered horse, burro or sheep at a rate of one ounce thallium sulfate per 100 lbs. of meat. The material persists in nature and causes soil sterilization in the areas immediately around bait stations. It can cause secondary poisoning effects to scavengers feeding on animals killed by this material.

The most significant change in animal control programs after WWII was the introduction of sodium monofluoroacetate commonly called compound 1080. The toxic nature of monofluoroacetate compounds was first noted in 1934 by Schrader.[2/] This discovery led to its use as a rodenticide in Germany before WWII. Testing of 1080 by the Fish and Wildlife Service was started in 1944 and field use was initiated shortly thereafter. Use increased until about 1962 then gradually declined about 30 percent from the 1962 level as use was more rigidly controlled.

2/ Atzert, Stephen P-1971 - A Review of Sodium Monofluoroacetate (compound 1080). Its Properties, Toxicology, and use in Predator and Rodent Control. Special Scientific Report--Wildlife No. 146 BSF&W, Washington, D.C.

Compound 1080, like thallium, is placed in a dead animal and the baited carcass placed in a location likely to be frequented by coyotes. Bait stations are generally placed on the ranges in the winter and removed in the spring. This technique is somewhat selective in that animals which hibernate are not exposed to the bait stations if the stations are removed in the spring before the animals come out of hibernation.

Four other methods of killing predators during this period were shooting, "coyote getters," strychnine baits and steel traps. All of these control techniques were used on lands administered by the Bureau of Land Management. Most of the predator control activities on public lands were carried out by agents of the Bureau of Sport Fisheries and Wildlife through the Division of Predator and Rodent Control which was renamed the Division of Wildlife Services in July 1965.

It is impossible to breakdown the costs of the predator control program solely on BLM administered lands. The control efforts on public lands however, were generally proportional to increases in the total predator control programs.

The following table 3/ shows expenditures of Federal and cooperative funds used in animal damage control.

Fiscal Year	Federal Funds	Cooperative Funds
1916	$ 168,665	$ 8,930
1940	398,960	632,115
1950	711,670	1,825,353
1960	1,481,150	2,889,785
1968	2,955,000	4,291,744
1969	3,034,000	4,231,617
1970	3,267,000	4,266,050
1971	3,399,000	4,693,300

3/ "Predator Control-1971" Report to the Council on Environmental Quality and the Department of the Interior by the Advisory Committee on Predator Control, January 1972.

The use of poisons for controlling predatory animals by the Federal Government in years prior to Executive Order 11643 accounted for an estimated 80 percent of the total predators killed in the control program. The following table shows the number of animals killed by Division of Wildlife Services activities in Fiscal Year 1971. 4/

Coyote	75,661
Bobcat	6,608
Black Bear	234
Opossum	3,377
Beaver	485
Weasel	3
Mountain Lion	80
Fox	8,675
Raccoon	6,278
Skunk	12,251
Porcupine	2,992
Muskrat	4
Nutria	886
Mink	8
Woodchuck	1
Rabbit	81
Badger	3,409

8042300 = 91258

$88/apiece

4/ 1972 Predator Control and Related Problems, Senate Hearings Before the Committee on Appropriations, 92nd Congress, Second Session, Page 120.

Not all of the animals were taken on public lands, however, a significant number of the reported coyotes and other large predators were killed on public lands.

In fiscal year 1971 animal damage control programs were funded at approximately $8 million, about 43 percent of which was appropriated by Congress. Over $2 million of the Federal program was directed at the control of coyotes with the emphasis placed on the use of chemical toxicants. The Western States, with substantial acreages of national resource lands administered by the Bureau of Land Management received most of the Federal funds and provided the most cooperator funds for direct control of predatory animals. The following Federal and cooperator funds were expended in these States in fiscal year 1971 for direct control of predatory animals:

State	Federal Funds	Cooperator Funds
Arizona	$ 58,000	$ 201,000
California	144,000	745,000
Colorado	108,000	373,000
Idaho	129,000	244,000
Montana	137,000	236,000
Nevada	136,000	194,000
New Mexico	125,000	196,000
Oregon	123,000	375,000
Utah	131,000	259,000
Washington	25,000	95,000
Wyoming	148,000	305,000
TOTAL	$1,264,000	$3,223,000

Increasing concern and criticism by the public of the federally supervised program developed mainly because of the methods used in controlling predators and the large scale of the program. The public opposition lead to the appointment of two special committees to study the programs and prepare reports. These reports and building opposition to the use of poisons resulted in the issuance of Presidential Executive Order 11643, which terminated the use of chemical toxicants on public lands for the control of predatory animals.

The first report on this controversial issue was made to the Secretary of the Interior on March 9, 1964, by the Secretary's Advisory Board on Wildlife Management and was entitled "Predator and rodent control in the United States." The advisory board consisted of Stanley A. Cain, Ira N. Gabrielson, Clarence M. Cottam, Thomas L. Kimball and A. Starker Leopold. Dr. Leopold served as chairman and the report is referred to as the "Leopold Report."

The 1964 Leopold Report reflected a philosophy of using the minimum effective control necessary. The key elements of the report were: (1) all native animals are resources of inherent interest and value to the people; consequently, basic government policy should be one of husbandry of all forms of wildlife; (2) at the same time, local population control is an essential part of management policy where a species is causing significant damage to other resources or where it endangers human health or safety. In such cases, control should be limited strictly to the troublesome species, preferably to the troublesome individuals, and only to localities where substantial damage or danger exists.

The latest study report was prepared by a special Advisory Committee on Predator Control sponsored jointly by the Council on Environmental Quality and the Department of the Interior. The committee was composed of Stanley A. Cain, Chairman; John A. Kadlec, Deputy Chairman; Durward L. Allen; Richard A. Cooley; Maurice G. Hornocker; A. Starker Leopold and Frederic H. Wagner. The Advisory Committee submitted its report on October 30, 1971. The substance of the report was contained in 15 recommendations which follow:

1. The Federal-State cooperation in predator control be continued, and that all funds in its support come from appropriations by Congress and by the legislatures.

2. Immediate congressional action be sought to remove all existing toxic chemicals from registration and use for operational predator control, that these restrictions extend to those toxicants used in field rodent control whose action is characterized by the secondary poisoning of scavengers. Pending, and in addition to, such congressional action, we recommend that the Secretary of the Interior disallow use of the aforementioned chemicals in the Federal operational program of predator and rodent control, and that this ruling be made a standard in cooperative agreements with the States. Moreover, we recommend that the individual States pass legislation to ban the use of toxicants in predator control.

3. That the field force of the Division of Wildlife Services be professionalized to emphasize employment of qualified wildlife biologists capable of administering and demonstrating a broadly based program of predator management.

4. That in all States, a cooperative trapper-trainer extension program be established as a means of aiding landowners in the minimum necessary control of predators on private land.

5. That Congress provide some means of alleviating the economic burden of livestock producers who experience heavy losses by predators.

6. That grazing permits and leases written by Federal land management agencies provide for possible suspension or revocations of grazing privileges if regulations governing predator control are violated.

7. That all methods of predator control be prohibited on statutory wilderness areas.

8. That Federal and State legislation be passed that would make the shooting from aircraft of wildlife, including predators and game animals, illegal except under exceptional circumstances and then only by authorized wildlife biologists of the appropriate Federal and State agencies.

9. We recommend to the Federal Aviation Authority that a provision be made for suspending or revoking the license of a private pilot and the confiscation of the aircraft -- when he knowingly carries a passenger whose acts lead to conviction for illegal predator control, such as shooting from the aircraft or distributing poisons.

10. That action be taken by Congress to rule out the broadcast of toxicants for the control of rodents, rabbits, and other vertebrate pests on Federal lands, and that the possibility of correlative action be explored for private lands as well.

11. We recommend a long-term research program based in the Division of Wildlife Research, BSF&W, that would cover the gamut of ecological problems associated with predators.

12. That the Division of Wildlife Research, BSF&W, undertake a detailed Socio-economic Study of cost-benefit ratios of predator control as a means of evaluating the need for and efficacy of the program and its separate parts.

13. That the Division of Wildlife Research, BSF&W, be delegated the responsibility for the study of the epidemiology of rabies in the field by a team of specialists provided with adequate funding.

14. That Congress give the Secretary of the Interior authority to take measures necessary to protect all species of predators that have been placed on the Endangered Species list by the Federal Government.

15. That the several States take measures to supplement the Federal protection of rare and endangered species by enacting laws and taking measures to protect locally rare populations.

Several recommendations of the Cain Committee have been implemented or are now in the process of implementation.

The Public Land Law Review Commission[5/] in its report to the President and Congress recommended the following:

5/ One-Third of the Nation's Land - A Report to the President and to Congress by the Public Land Law Review Commission June 10, 1970, Washington, D.C.

"We are convinced that predator control programs should be eliminated or reduced on Federal public lands in furtherance of wildlife management objectives. There are long standing programs of predator control that have substantially reduced and in some cases virtually eliminated certain species that are natural predators. While these programs may have been of some benefit to livestock operators in reducing cattle and sheep depredations by coyote, puma, cougar, and bear, they have upset important natural mechanisms for the population control of other species. As a result, some species, most notably deer, elk, and moose have increased in some localities to levels far above the capacity of the natural habitat to support them. Hunting has not always been sufficient to eliminate excesses. Habitat destruction and staravation have been the common results."

Presidential Executive Order 11643 (Appendix 2) entitled - Environmental Safeguards on Activities for Animal Damage Control on Federal Lands was issued February 8, 1972. Section 1 of this Order stated the following: "It is the policy of the Federal Government to (1) restrict the use on Federal lands of chemical toxicants for the purpose of killing predatory mammals or birds; (2) restrict the use on such lands of chemical toxicants which cause any secondary poisoning effects for the purpose of killing other mammals, birds, or reptiles; and (3) restrict the use of both such types of toxicants in any Federal programs of mammal or bird damage control that may be authorized by law. All such mammal or bird damage control programs shall be conducted in a manner which contributed to the maintenance of environmental quality, and to the conservation and protection, to the

greatest degree possible, of the Nation's wildlife resource, including predatory animals."

Section 3. directs agencies Heads to take action necessary on Federal lands to prevent:

(1) "the field use of any chemical toxicant for the purpose of killing a predatory mammal or bird or;

(2) the field use of any chemical toxicant which causes any secondary poisoning effect for the purpose of killing mammals, birds, or reptiles."

Provisions were made for certain exceptions to protect human health or safety; to protect species of wildlife threatened with extinction; or to prevent substantial irretrievable damage to nationally significant natural resources.

The primary justification for coyote control is to reduce losses of sheep grazing on Western ranges. Approximately 28 percent of all sheep grazed in the U.S. are grazed at least part of the year on national resource lands in the West administered by the Bureau of Land Management.

Most of the reported losses of livestock or predation events are not verified by Federal or State personnel. The program continues to operate on a basis of reported losses or on anticipated predator problems. Executive Order 11643 stopped the use of chemical toxicants for predator control on Federal lands effective February 9, 1972, and set the ground rules for the current animal control programs.

Even though chemical toxicants were prohibited,the funds allocated to the program since the implementation of the Order in February 1972 have remained substantially the same as for the last year of operation when toxicant use was permissible.

The coyote remains the major target species of predator control on national resource lands with lessor efforts directed toward bobcats, black bear and mountain lions. Current programs are carried out by trapping with steel traps, aerial hunting, ground shooting and denning. With the exception of steel traps the presently used methods are more selective of individual animals killed and do not result in the death of non-target species. Control efforts are not as extensive as in previous years when toxicants were used. Most efforts now are generally limited to trouble areas and in the vicinity of sheep bands.

The present program on about 140 million acres of public lands administered by the Bureau of Land Management is a cooperative effort involving the Division of Wildlife Services, Bureau of Sport Fisheries and Wildlife and the various State Fish and Game agencies. There is some procedural variation among BLM offices to fit local situations, but generally the procedures are as follows:

1. Representatives of BLM, BSF&W and the State Fish and Wildlife agencies meet at least once a year at the State level. This meeting is often held in the early spring and serves as a coordinating meeting to develop control plans and strategies for that year.

2. Livestock operators suffering predator damage or desiring preventive control submit request through BLM District Managers (See sample forms Appendix 5).

Bureau of Land Management reviews the requests and either rejects, modifies or approves animal control subject to review and concurrence by the State Fish and Game Agency. Bureau of Sport Fisheries and Wildlife has the final review and may take action on approved requests or reject the requests. BSF&W also has the final say on control methodology.

B. Rodent Control

Forest cutting practices are designed to take advantage of natural seed fall, however, establishment of timber stands can not be left to chance. Reforestation surveys are made after timber harvest and if the area does not meet reforestation stocking standards, reforestation plans are prepared.

Successful reforestation using direct seeding of tree seed has several biological and financial advantages. The seedlings are established in place and are not subject to root injury and shock associated with transplanting. Seeding is not tied to nursery production schedules. Seeding requires low investment in equipment and facilities, generally costs less per acre than planting, and can be done on rocky or inaccessible sites on large areas where planting is not practical.

The major cause of forest tree seed loss is due to both consumption and removal by small mammals. Federal, State and private agencies began chemical control of rodents on direct seeding projects in 1949.[6] Some 400,000 acres of BLM administered commercial forest lands have been artifically reforested to date. While the total acreage of seeding and planting varies from year to year, direct seeding averages 35 percent of the annual reforestation acreage.

Deer mice (Peromyscus spp.) are considered the most destructive of the tree seed-eating rodents. Hooven[7] reports that deer mice were

6/Engstrom, W.H., 1955. Direct seeding of Western Red Cedar. Research Note No. 20. Oregon State Board of Forestry, page 6.

7/Hooven, E.F., 1966. Pine regeneration in Oregon - habits and control of seed-eating mammals. Forest Research Lab., Oregon State Univ., Res. Paper 5.

primary consumers of seed in Oregon followed closely by golden-mantled ground squirrels (Citellus lateralis) and chipmunks (Eutamias spp.). Shrews (Sorex spp.) are listed by Lawrence et al [8] as destroyers of seed and newly germinated seedlings. After seed has germinated the mountain pocket gopher may cause heavy damage to seeded plantations in many locations.

Control of rodents is possible for short periods of time with poison baits. This is because elimination of the initial rodent population is incomplete and reinfestation from untreated areas is often rapid. Chemical toxicants previously used by BLM include sodium monfluoroacetate known as 1080. This compound was first used for rodent control in 1945 and Endrin has been used since 1956.[9] Strychnine treated oats have been used to a very limited extent on BLM lands.

Endrin and 1080 were placed on the Department of the Interior prohibited chemical list in June 1970 and have not been used since that time. A suitable and effective chemical substitute for seed protection has not yet been found. The current reforestation program shift is from seeding to planting at an additional cost of $15 to $25 per acre. Planting appears to be the only substitute for direct seeding under current technology. The major constraint of planting acres otherwise qualifying for seeding is the lack of available nursery stock.

The statement - select or protect damage to tree plantings among

This should be higher $50 to $75

8/Lawrence, E. R., Kverno, N. B. and H. D. Hartwell, 1961. Guide to Feeding Injuries on Conifers in the Pacific Northwest. Western Forest and Conservation Assoc., 44 pp.

9/Roy, Douglas F. 1961. Seed spotting with Endrin-treated Douglas-fir seed in Northwestern California, USDA, For. Ser. Pac. S.W. For. and Rge, Expt. Sta., Berkeley, Calif.

Porcupines (Erethizon sp.), a large member of the rodent family, frequently cause heavy damage in seedling to pole size stands. Small trees are killed, while larger trees are deformed so badly they become unmerchantable.[10/] This is particularly true in areas where pine species are of major importance. Porcupine bait stations using Strychnine treated salt blocks have proven to be a successful method in controlling porcupine populations[11/] and remain in limited use today. (See Appendix 4, Guidelines for Use of Poisons In Non-Predatory Animal Damage Control).

Rodent control on wildlife habitat seeding projects indicate that the golden-mantled ground squirrels are highly susceptible to 1080 after consuming relatively few kernels of crimped oat groats treated with two ozs. of 1080 per 100 weight. Broadcast bait is treated with dye to repel seed eating birds. The field use of chemical toxicants in range land and wildlife seeding projects ceased in 1970 and has not be reinstituted.

An important requisite to successful revegetation of range lands is protection of the area from grazing animals and in some cases protection of the range seed and seedlings from rodents. Deer mice are known to be highly adaptable, moving back into freshly cleared areas, and easily adapt to new habitat.[12/] An example of the adaptability of these mice is afforded by a plot cleared

Rabbits are also a major problem

10/Heidmann, L. J., 1972. An Initial Assessment of Animal Damage in the Forests of the Southwest. Research Note RM-219, Rocky Mountain Forest and Range Experiment Station., pp. 7.

11/Bureau of Land Management, 1968. Porcupine Bait Station. Technical Notes, Portland Service Center, pp. 4.

12/Gashwiler, J. W. 1959. Small Mammal Study in West-Central Oregon. Journal of Mammals, 40:128-139.

of trees, plowed and planted with crested wheatgrass. Deer mice were the only rodent species to invade the stand of crested wheatgrass between 1958 and 1963.[13/] The Bureau has used strychnine treated oats and 1080 experimentally to control mice, prairie dogs, pocket gophers, ground squirrels and rats.

A USDI policy issued June 22, 1965, states that prairie dog control may not be undertaken until surveys for the black-footed ferret are completed. Control cannot be undertaken if ferrets are present. Since then prairie dog sanctuaries have been created in several Western States. Current practice excludes prairie dog control of any kind until it is determined if introduction of black-footed ferret is feasible.

Some rodent control on national resource lands to suppress disease and reduce livestock loss to rabies was done prior to 1970. Rabies accounted for 3,522 animal deaths during 1969, of which 2,672 were wild species. This does not account for all the range livestock or wild animals that have died from rabies, which were not found or tested.

Sylvatic plague is an endemic disease primarily of rodents which is transmitted by fleas. The disease often occurs in epidemic proportions which practically annihilate local rodent populations. Sylvatic plague can infect man and wildlife species. Sylvatic plague occasionally reaches epizootic proportions in prairie dogs and ground squirrels. The U.S. Health Service reported 951 cases of sylvatic plague in humans resulting

13/Turkowski, Frank J. and Reynolds, Hudson G., 1970. Response of Some Rodent Populations to Pinyon-Juniper Reduction on the Kaibab Plateau, Arizona. The Southwest Naturalist 15 (1):23-37.

in 723 deaths from 1900 to 1964. Chemical toxicants have been used to control sylvatic plague carrying rodents on BLM lands in the past.

2. Policies

A. Legislation and Regulations

Following are the current laws[14] and 43 CFR regulations governing toxic chemical programs.

1. The Federal Insecticide, Fungicide, and Rodenticide Act of June 24, 1947, (7 USC 135-135K as amended).

The Federal Environmental Pesticide Control Act of October 21, 1972, (86 Stat. 973) completely amends the Federal Insecticide, Fungicide, and Rodenticide Act. The administrator of the Environmental Protection Agency will determine when emergency conditions exist and may exempt Federal or State agencies from provisions of the Act. Exceptions will be made only if the use of chemical toxicants are required to protect human life, health or safety; to preserve a wildlife species threatened with extinction or likely to become so threatened; or to prevent substantial irretrievable damage to nationally significant natural resource. The Administrator of the Environmental Protection Agency will make the determination that the emergency cannot be dealt with except by use of chemical toxicants.

2. The Food, Drug and Cosmetic Act of June 25, 1938, (21 USC 342) and the Miller Amendment to the Act of July 22, 1954, (21 USC 345A) provides that tolerances be established for pesticide residues in foods where these materials are necessary for the protection of food supply. The Miller Amendment gives the Administrator of the Environmental Protection Agency the authority to establish such residue tolerances and spells out in detail the procedures to be followed. The Federal Insecticide, Fungicide,

14/Shepards Citation, Inc. 1968. Digest of Public Land Laws. Library of Congress Catalog Number: 68-61584, pp. 1091.

and Rodenticide Act and the Miller Amendment supplement each other and are interrelated by law and practical operation. It is the policy not to register any new pesticide unless: (a) tolerance has been established under the Miller Amendment, or (b) it has been shown that no residues will result from proper use of the product. Conversely, a tolerance will not normally be granted until application for registration has been filled. The responsibility for administering the above portions of the Act and Amendment is vested in the Environmental Protection Agency.

3. The Act of March 2, 1931, (7 USC 426-236B) directs the Secretary of the Interior to conduct campaigns for the destruction and control of animals injurious to agriculture, horticulture, forestry, wild game animals, birds, livestock and people. Program responsibility has been assigned to the Bureau of Sport Fisheries and Wildlife which conducts a national cooperative animal damage control program on State, private and public lands.

4. The Endangered Species Conservation Act of 1969 (16 USC 668aa).

The Congress finds and declares that one of the unfortunate consequences of growth and development in the United States has been the extermination of some native species of fish and wildlife. The purpose of this act is to provide a program for the conservation, protection, restoration, and propagation of selected species of native fish and wildlife, including migratory birds, that are threatened with extinction. For the purpose of this act, the term "fish and wildlife" means any wild mammal, fish, wild bird, amphibian, reptile, mollusk, or crustacean.

5. Bald Eagle Protection Act (16 USC 688) as amended by the Act of October 23, 1972,(PL 92-535) provides for the protection of bald and golden eagles. Whoever, without being permitted to do so, knowingly or with wanton disregard for the consequences of this act, take, possess, sell, purchase, barter, transport, export or import, at any time or in any manner, any bald eagle commonly known as the American eagle, or golden eagle, alive or dead, or any part, nest, or egg, shall be fined not more than $5,000 or imprisoned not more than one year or both. The head of any Federal agency who has issued a lease, license, permit, or other agreement authorizing the grazing of domestic livestock on Federal lands to any person who is convicted of a violation of this act or of any permit or regulation issued, may immediately cancel each such lease, license, permit or other agreement.

6. Cooperation on Wildlife (43 CFR Subtitle A part 24).

Sets forth the Secretary's policy that Interior agencies work harmoniously with States for the common objective of maintaining fish and wildlife resources for their aesthetic, scientific, recreation, and economic use.

a. Requires:

(1) Consultation with States on certain aspects of wildlife administration.

(2) Cooperative agreements between States and Interior agencies when States desire them.

B. Other Directives

The use of chemical toxicants for animal control practices on public lands administered by the Bureau of Land Management is guided by policy stated in Executive Order 11643 and manual directives of the Department of the Interior and the Bureau of Land Management Policy directives contained in Executive Order 11643 (Appendix 2) have been discussed. Basically this policy restricts the field use of chemical toxicants for killing predatory mammals or birds or the field use of chemical toxicants which cause any secondary poisoning effect for the purpose of killing mammals, birds, or reptiles.

Department of the Interior policies and procedures guiding the use of pesticides are contained in Departmental Manual 517 issued 7/31/70 (Appendix 3). This Manual requires that all areas and programs under Departmental jurisdiction will:

(1) Conform with all provisions of Federal and State pesticide laws.

(2) Not use chemicals on the prohibited list.

(3) Use chemicals on the restricted list only when non-chemical techniques have been considered and found to be inadequate; and use can be limited to small scale operations.

Departmental guidelines for use of pesticides require:

(1) Chemical pesticides not be used alone when non-chemical or integrated chemical and non-chemical techniques offer an alternative option.

(2) Pesticides not be used where there is a basis for belief that wildlife will be directly or indirectly threatened or water quality will be degraded.

(3) No large scale non-specific applications of pesticides.

(4) Specific safety procedures be followed.

(5) Programs will be coordinated with Federal, State and local authorities.

(6) All applications of pesticides will conform to guidelines and standards of the Pesticides Subcommittee of the Cabinet Committee on the Environment.

Other requirements relate to technical assistance, program review and reporting requirements.

Bureau of Land Management guidance on the use of chemical pesticides is contained in BLM Manual 9222 issued 5/3/72. This Bureau Manual reiterates the policy and guidance described above and provides procedures for program development, submission and implementation giving consideration to the environmental impact of the proposed project.

3. Coordination

The use of chemical toxicants on national resource lands by Federal and State agencies other than Bureau of Land Management is limited by cooperative agreements, memorandums of understanding, or other approved authorizations. For example, the Federal Animal Damage Control Act of March 2, 1931, directed the Secretary of the Interior, through the Bureau of Sport Fisheries and Wildlife, to conduct campaigns for the destruction and control of animals injurious to agriculture, livestock and people. In response to this Act, BSF&W operates a national cooperative animal damage control program on State, private and public lands. The control of predators on lands administered by BLM is one such cooperative program. Other examples of programs conducted on BLM lands through State and county agencies involve forest pest control, rodent control, noxious week control, and grasshopper control, to name a few.

No projects involving chemical toxicants for use on national resource lands by any Federal, State, local agency group or individual lands are authorized unless they are approved by the Bureau of Land Management pesticide screening committee subject to review by the Departmental Working Group on Pesticides.

I. Description of the Proposal

To comply with provisions of the Executive Order and with the intent of protecting the public interest, the Department is proposing amendments to 43 CFR, Part 1720, which would forbid the field use on the public lands of any chemical toxicants which might cause the death of any predatory mammal or bird or secondary poisoning effect to any mammal, bird, or reptile, with certain exceptions. Proposed regulations are shown in appendix 1.

The Executive Order restricting the use of chemical toxicants has committed the Department of the Interior to action that excludes considerations or options. However, the statement is written in the context of reviewing the restriction of chemical toxicants as a proposal in order to fully evaluate the impact of prohibiting their use.

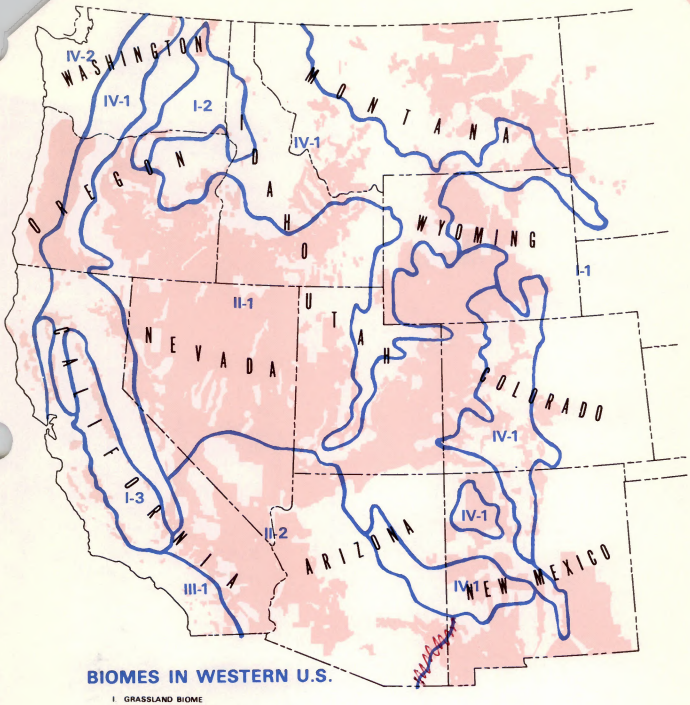
The proposed regulation will bring about major changes in the types of control methods used and the intensity of use. The four basic control methods are: (1) trapping, (2) denning, (3) shooting, and (4) poisoning. These four methods vary considerably in effectiveness and selectivity. There are also two basic philosophies or alternatives of control: (1) trouble shooting type control directed at problem areas or individual animals causing trouble, and (2) prophylactic animal control aimed at predator population reductions over large geographic areas.

II. Description of the Environment

The historical use of chemical toxicants for animal damage control on the national resource lands prior to Executive Order 11643 took place mainly on the sheep grazing allotments where predation by coyotes was significant. Sheep grazing on Western rangelands has been a common practice for over a hundred years and over the entire expanse of these operations, the threat of predation by coyotes and other predators existed. The impact of the proposed regulations would occur primarily on those lands grazed by sheep and to a lesser extent on the national resource lands of western Oregon where rodent control practices have been carried out to assist reforestation practices in the planting of tree seeds and seedlings.

The proposed regulations affect 450 million acres of public lands administered by the Bureau of Land Management. Primarily affected will be public lands in the Western United States (Chart 1). This area comprises approximately 175 million acres of national resource lands. Of this acreage, 160 million acres are grazed by domestic livestock. Vegetative cover on the national resource lands varies according to the six major biomes differing significantly in physical structure, ecological importance and socio-economic values. In a given biome the life form of the vegetation reflects the major features of climate and to a great extent determines the structural nature of the habitat for animals. Consequently, it provides a sound basis for a national ecological classification.

The biome includes not only the climatic climax vegetation but the edaphic climaxes and the developmental successional stages as well, which in many



BIOMES IN WESTERN U.S.

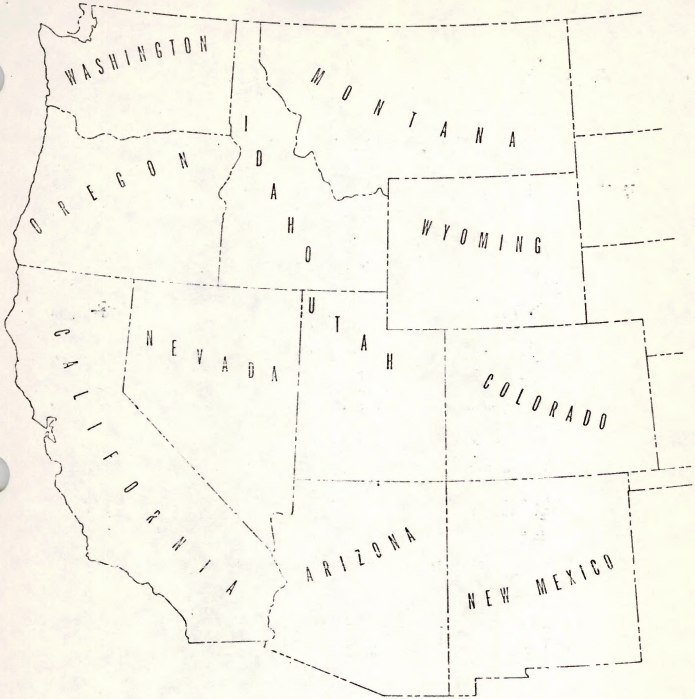
I. GRASSLAND BIOME
   1. Temperate Grassland
   2. Palonse Prairie Grassland
   3. California Prarie Grassland
II. OESERT BIOME
   1. Cold Desert
   2. Hot Desert
III. WOODLAND BRUSHLANO
   1. Broad Sclerophyll (Oak Chaparral)
   2. Northwest Coastal Coniferous Forest
IV. CONIFEROUS FOREST BIOME
   1. Montane
   2. Northwest Coastal Forest

PUBLIC LANDS MANAGED BY BLM

United States Department of the Interior

Bureau of Land Management

CHART I



PUBLIC LANDS IN THE WESTERN STATES

Legend

PUBLIC LANDS MANAGED BY BLM

United States Department of the Interior

Bureau of Land Management

cases are dominated by other plant and animal life forms. Many organisms require both the developmental and climax stages in succession or the ecotones ("edge effect") between them. Therefore, the biome is a total community unit and not a unit of vegetation alone; the animals as well as plants are a part of the biome. The different biomes of the national resource lands are characterized by much vegetative and animal variety, value, quality and quantity and are identified as follows:

1. Grassland biome
2. Rocky Mountain Coniferous Forest biome
3. Desert biome
4. Pacific Coniferous Forest biome
5. Woodland-Brushland biome
6. Tundra biome

Topography varies from flatland to rugged mountains and climatic conditions differ from hot and dry, to cool and wet. Most of the area receives between 10 to 20 inches of precipitation per year with extremes of 3 inches in the southwest and in excess of 60 inches in western Oregon. The variety of ecosystems existing in this environment supports a multitude of endemic wildlife species as well as providing forage for domestic livestock grazing to the extent of 3.5 million cattle and 5 million sheep during certain seasons of the year. Approximately 23,000 livestock operators are dependent at varying degrees on the public lands for their livelihood.

Exclusive of Alaska, where predator control is very limited, the Bureau of Land Management administers an estimated 103.5 million acres of big

game habitat; 110.8 million acres of small game habitat and 800,000 acres of waterfowl habitat. Rough estimates show the following large animals satisfy all or part of their habitat requirements on these national resource lands:

Antelope	170,000
Black Bear	4,500
Buffalo	145
Deer	
Black tail	195,000
White tail	42,000
Mule	1,190,000
Elk	60,000
Moose	1,300
Mt. Goat	500
Mt. Lion	1,500
Peccary	4,500
Bighorn Sheep	8,900
Turkey	3,500

There are also 13 species of rare and 26 endangered species of wildlife which are thought to inhabit these lands.

In addition to large animals, myriads of small, but not necessarily insignificant, animals occur in varying abundance including small mammals, birds, reptiles and amphibians in addition to the invertebrate fauna.

In addition to the uses being made by wildlife and domestic livestock, there are certain recreational and aesthetic values attached to this environment as well as its source for minerals, timber products, water and other natural resources.

For example, in 1970 it was estimated that public lands administered by BLM received 67,238,000 visits. These included, among other: camping -- 8.1 million; picnicking -- 5.6 million; sightseeing -- 27.1 million. The potential hazards for visitors to the public lands coming in contact with chemical toxicants placed at random is rather significant. During the 10-year period 1959-1969 there were 105 reported incidents connected with Federal animal control programs that resulted in 19 injuries to human beings and 118 deaths to domestic animals.[15/]

15/ Unpublished annual wildlife report 1971, Division of Wildlife, Bureau of Land Management.

III. Environmental Impact of the Proposed Action:

The use of poisons to control predators has engendered opposition because of reported (1) inhumanity, i.e., some poisons result in subjecting animal victims to agony prior to death, (2) nonselectivity, i.e., poisons are taken by nontarget species, (3) nonspecificity, i.e., any individual of the target species is vulnerable whether or not it preys on livestock, and (4) all poisons are dangerous to man. Adoption of the proposed regulation would eliminate some and reduce others of these undesirable attributes of use of chemical toxicants.

Hornocker[16/] points out the lack of information effects of predator control. In the 58 years of Federal participation in an increasing costly control program the agencies involved have not to this date done an effective study to appraise the biological or economic aspects of the multi-million dollar program.

As mentioned earlier, approximately 80 percent of the predators killed on public lands by the predator control program were killed by toxic chemicals. If increased use of nonchemical control methods does not compensate for the kill by poison, and it is doubtful this will happen, then the substantial reduction of predators killed may be significant. Permitting these target and nontarget animals to survive should result in a return to more normal, less disrupted predator-prey relationships among wildlife.

16/Hornocker, Maurice G., 1972, Predator Ecology and Management - What now? The Journal of Wildlife Management Vol. 36, No. 2, April 1973.

Restricting the use of poison will also eliminate all losses of wildlife and pet animals due to secondary poisoning effects.

A study on the Bridger National Forest in 1972[17/] gives some insight into effects of using mechanical control techniques in contrast to chemical methods. This study showed that by substituting steel traps, calling and shooting, and aerial hunting, coyotes can be effectively controlled but at a substantially higher cost. On the study area in previous years when chemical toxicants were used $7,000 to $10,000 of Federal and cooperative funds were used. To effect the same level of control in 1972 $32,700 ($13,700 for manpower and $18,300 for helicopter rental) was expended.

Average sheep losses reported by graziers for the 4-year period 1968-71 when chemical toxicants were used were compared with 1972 when mechanical methods were used.

Ranger District	1968-71 Four-Year Average	1972
Cokeville	646	661
Big Piney	290	324
Afton	515	649
Thayne	641	631
Jim Bridger	297	213
Green River	8	0
Total Forest	2,397	2,478

17/The Bridger Project: An Evaluation of Mechanical Control Techniques, December 1972, by USDI, Bureau of Sport Fisheries and Wildlife.

A. Effect on Predatory Mammals

Wagner[18] discusses the possiblity of interspecific competition between predator species in the same trophic levels with, perhaps the larger canidae being the more aggressive, and therefore, dominant forms. Whether these interactions are due to aggressive actions or competition for a common source of food has not be ascertained.

If the implementation of these actions results in larger coyote populations and interspecific competition actually is a factor, then smaller populations of foxes and possibly badgers and bobcats might result.

If other control methods do not compensate for the predators previously taken by toxic chemicals, predator populations may increase however, there is an inverse relationship[19] between population density of coyotes and average litter size which tends to result in smaller litters as the population density increases. In any event predator populations will not exceed certain levels imposed by environmental pressures such as intra-specific competition, prey abundance, disease etc. Self-regulatory population mechanisms will operate and have a dampening effect on the amplitudes of population swings.

B. Effect on Range Livestock

Effects on livestock of restricting the use of poisons on the public lands to kill predators are not entirely known. The impact hinges upon whether or not the poison restrictions will cause a greater livestock

18/Wagner, Frederic H. 1972. Coyotes and Sheep - Some Thoughts on Ecology, Economics and Ethics, pg. 40. Utah State Univ., Logan, Utah.

19/Knowlton, Frederick, K. 1972. Preliminary Interpretations of Coyote Population Mechanics with some Management Implications; The Journal of Wildlife Management, Vol. 36, No. 2, April 1972.

loss to predation, because of larger predator populations and/or a greater number of miscreant individual predators. Predation on cattle has not been significant except in isolated cases. The primary impact, if any, will be coyote predation on sheep.

The restriction of poisons on public lands could have an impact on adjacent private lands. The natural home ranges of coyotes and other predators do not, of course, conform to Federal, State or private land boundaries. Coyotes and other predators could increase on Federal lands as a result of this action and range onto other nonFederal lands. This would not likely result in a major impact since they could be subjected to all existing control methods once off Federal lands.

In recent years, there has been a substantial shift from sheep to cattle use on public lands. Among the many economic and social reasons for this shift, increased losses of sheep to predators may have been a contributory factor. Also some marginal sheep operators have gone out of business, but this has not happened solely as a result of losses to predators.

The sheep industry has generally declined over the past 30 years with reductions in sheep numbers in Western States ranging from one-third to one-half the numbers grazed in the 1930 to 1940 period. Prohibiting the use of chemical toxicants on public lands might cause an increase in the use of poisons by livestock operators on those private and leased lands intermingled with public lands. This is speculative and there is no way to assess the impact of these actions if they were to occur.

Perhaps the experience of removal of chemical toxicants from public lands in the Bureau of Land Management's Pinedale, Wyoming, District will give some insight into the impact on similar public lands elsewhere.

The Pinedale District authorized up to forty 1080 bait stations and an unknown number of cyanide guns on district public lands through 1967. The District authorized fewer than 40 poison stations in 1968 and by 1969, for various reasons including the relatively small number of sheep grazed in this District (five operators and 3,661 animal unit months) and the high potential for destruction of nontarget wildlife species, the District ceased authorization of all poison stations on public lands.

No intensive study was made but the results of this action appears as follows:

1. An insignificant increase, if any at all, in coyote numbers (based on winter observations).
2. No apparent or substantiated increase in livestock predation has been detected.
3. No detectable effect on big game species using public lands in this District. Normal variations above and below long-term fawn-doe ratios have been seen in deer and antelope populations. Antelope populations have increased since the lethal stations were removed.
4. Other types of predator control have been used in the District but these were also used in conjunction with the poison stations. One

exception is the addition of a bounty system by the Sublette County Predatory Animal Control Board. This has resulted in over 200 bountied coyotes in 1971 and over 400 in 1972. The newly instituted bounty system resulted in fairly high coyote kills because most of the coyotes were taken from snowmobiles and practically all of the Pinedale District was accessible to these machines during the 1971-72 winter because of unusually deep and persistent snow cover.

In 1967, Division of Wildlife Services reported over 500 coyotes killed by aerial hunting in addition to the poison station operation. Aerial hunting activity has been substantially reduced during the last four years. These events indicate an overall decrease in the number of coyotes killed by nonpoison methods plus whatever decrease in kill which can be attributed to removal of poison stations.

In summary, removal of the poison stations from the public lands in this District appears to have caused no detectable change in livestock predation or big game population levels or production and very little effect on coyote populations. Nontarget wildlife species have benefited from poison removal.

The following table from Coyote and Sheep, by Frederic H. Wagner,[20] shows mean, annual percentage of sheep dying from all causes previous to, and during the use of 1080 poison.

Mean, Annual Percentage of Sheep Dying from All Causes Previous to, and During the Use of 1080 Poison[a]

State	Mean, Annual Percent of Sheep Lost 1924-39	1940-49	1950-70
Montana	8.5	8.4	10.3
Wyoming	9.1	7.9	8.4
Idaho	8.6	8.4	7.0
Utah	10.9	11.1	9.4
Nevada	12.2	11.7	10.3
Colorado	10.2	9.4	9.1
Arizona	10.3	8.6	7.9
New Mexico	10.9	10.5	10.8
Texas	9.4	10.3	11.3
Mean	10.0	9.6	9.4

a/The percentages are calculated from the records of the USDA Crop and Livestock Reporting Service. The 1940-49 period is considered to be the decade immediately preceding widespread general 1080 use. The 1080 poison has been in general use throughout the 1950-70 period.

20/Wagner, Frederic H., 1972. Coyotes and Sheep - Some Thoughts on Ecology, Economics and Ethics, pg. 35. Utah State Univ., Logan, Utah

These data indicate little, if any, change in the level of sheep loss between the 1940-49 period (prior to widespread use of 1080) and the 20-year period of widespread use of 1080, 1950-70. This rather constant level of sheep losses raises questions about the effectiveness of poison as a predator control methods.

Records kept by U.S. Forest Service district rangers show the number of livestock entering on Forest Service lands at the start of the grazing season and the numbers removed at the end of the season.[21/] The difference in these two figures indicates the loss of livestock due to all causes while the animals grazed on Forest Service lands. Graziers were asked at the end of the season to assign losses to various causes. The reports of livestock graziers have indicated increased percentages of total losses have been attributed to predators during the period 1950-70, when chemical toxicants were used. A problem common to all available data lies in the method of acquiring raw data, that is, all assigned predator losses are based on reports of livestock graziers and these are not necessarily verified by field examinations.

Other factors raise additional questions about the effectiveness of poison programs on coyotes. (1) Coyotes are extremely intelligent animals which learn from experience and quickly become wary of poison bait stations, cyanide guns, and poison pellets. This theory has been borne out in Wyoming where three counties used more compound 1080 than did the Division of Wildlife Services in all its programs, yet continued to experience

21/ Predator Control-1971. Report by the Advisory Committee on Predator Control, January 1972, pg. 46.

high coyote populations and significant predation. (2) Poisoning of adults may disrupt territories and family groups resulting in additional predation. (3) Nonfatal poisoning of adults may cause some individuals, because of physical disability, to prey more heavily on sheep. (4) Size of a coyote population is probably affected more by the availability of rodents and lagomorphs than by any other single factor.

To summarize, the impact on livestock and the livestock industry is unknown, speculative at best, with available evidence suggesting a low economic and environmental impact.

C. Effects on Big Game

The effects of predators on big game populations have been considered in many investigations. Rasmussen,[22/] in his study of the increase and decline of the Kaibab deer herd in Arizona, considered the control of large predators as a significant contributing factor to the rapid increase of this deer herd.

Wagner[23/] reviewed more recent studies such as Leopold,[24/] Talbot and Talbot,[25/] Pimlott,[26/] and Hornocker[27/] and concluded that the impact

22/Rasmussen, D. I., 1941. Biotic Communities of Kaibab Plateau, Arizona, Ecological monographs. 3: 229-275.

23/Wagner, Frederic H., 1972. Coyotes and Sheep - Some Thoughts on Ecology, Economics and Ethics, pg. 40. Utah State Univ., Logan, Utah.

24/Leopold, A. S., 1955. Too Many Deer. Scient. Amer., Nov. 1955.

25/Talbot, L. M., and M. H. Talbot, 1963. The Wildebeest in Western Masailand, East Africa. Wildl. Monogr., No. 12, 88 pp.

26/Pimlott, D. H., 1967. Wolf predation and ungulate populations. American Zoolog., 7:267-278.

27/Hornocker, M. G., 1970. An analysis of mountain lion predation upon mule deer and elk in the Idaho Primitive Area. Wildl. Monogr., No. 21, 39 pp.

of predators as a controlling force on big game numbers is probably less significant than thought earlier.

Coyotes, the primary target animal of predator control, are not considered by most biologists to be a significant predator on deer and certainly not on elk and larger herbivores where suitable habitat exists and big game populations are not extremely low. Antelope numbers in BLM's Pinedale, Wyoming, District, which have been increasing in recent years, continued to increase after the use of chemical toxicants was discontinued on public lands.

In the final analysis the restriction of the use of poisons should result in a more natural equilibrium for all wildlife populations including big game and predators.

D. Effects on Small Wildlife Prey Species

Mammalogists do not agree as to the effect of predators on small prey species, such as mice, squirrels, rabbits, etc. Many, however, feel other environmental factors including food, cover, weather, interspecific competition, etc., exert greater influence on population levels than do predators. Predator numbers, in fact, respond more to prey numbers rather than determine or limit prey populations size.

Wagner and Stoddard[28/] in a study of the influence of coyote predation on black-tailed jackrabbit populations in Utah postulated "that coyote predation

28/Wagner, Fredric H., and L. Charles Stoddard, 1972. Influence of Coyote Predation on Black-tailed Jackrabbit populations in Utah, The Journal of Wildlife Management, Vol. 36, No. 2, April 1972.

played an important role in the jackrabbit population trends from 1962 to 1970: hastening, if not primarily causing, the decline from 1963 to 1967 by its impact, and largely, or in part, permitting the increase in rabbits in 1968-70 by its relaxation." Other workers have concluded that predators do not have a major limiting impact on prey species.

Clark[29/] in a recent study of the influence of jackrabbit density on coyote population change in northern Utah wrote "Long-range coyote density appears to be partly a function of the size of the food base, with artificial control doubtlessly playing a role. In this region, where the biota is relatively simple, the jackrabbit constitutes a major part of the food base and therefore is a partial determinant of coyote density." These studies are a few of many which point out the complex interrelationships between predators and prey species but do not give data upon which valid projection can be based.

E. Effects on Humans

The potential hazards for visitors to the public lands coming in contact with chemical toxicants placed at random is rather significant. During the 10-year period 1959-1969 there were 105 reported incidents connected with Federal animal control programs that resulted in 19 injuries to human beings and 118 deaths to domestic animals.[30/] No human deaths have been attributed, however, to this program.

29/Clark, Frank W., 1972 Influence of Jackrabbit Density on Coyote Population Change, Journal of Wildlife Management, Vol. 36, No. 2, April 1972.

30/Page 38, Draft Environmental Statement, proposed Animal Damage Control Act of 1972, U.S. Department of the Interior, Bureau of Sport Wildlife.

F. Benefits

Restricting the use of poison for predator control on public lands will be beneficial in meeting public demands for more humane and selective methods of control. Wildlife occurring on the public lands is collectively owned by the public and survival of nonoffending predators and nontarget wildlife which would have succumbed to poison is fully in accord with public ecological awareness and demand for less predator control.

A study for the Public Land Law Review Commission[31] developed indexes of medium level projections of total future requirements for the likely output from the Federal lands for selected goods and services, 1980 and 2000.

The study, using agricultural cropland current production (1965-1968) as the index value of 100, projected the following:

	Output from Federal Lands	
	1980	2000
Agricultural Croplands	100	100
Livestock Forage	77	55
Wildlife Habitat	128	173
Outdoor Recreation	242	465

This study indicates greatly increasing outputs for wildlife habitat and outdoor recreation on public lands in contrast to decreasing output on public lands for livestock forage.

31/Future Demands on the Public Lands--Vol. III, Probable Future Demands on Public Lands--A study prepared for the Public Land Law Review Commission, October 1970.

Removal of poisonous substances from public lands, in consideration of rapidly increasing use by citizens, will enhance the safety of public use by eliminating the threat of accidental poisoning of man and pets.

Since the use of chemicals in baiting, treated seed, animal repellents, and predator control has potential for significant degradation of water quality, restricting the use of chemical toxicants will lessen this threat. Knowledge is lacking regarding the long-range effects of these substances on our water resources. The biological significance of trace amounts of many of the complex carbon compounds is only partially understood, their persistence in natural waters is largely unknown.

The use of toxicant and repellent chemicals to protect seedlings from rodents and browsing mammals is limited to ground applications in forest nurseries and seed orchards. Under these controlled conditions, these chemicals pose no threat to water quality.

Restricting use of chemical toxicants to control rodents many increase the use of forest management practices designed to provide the best site conditions favoring natural regeneration. Shelterwood and seed tree harvesting methods normally result in natural establishment of tree regeneration thereby avoiding the use of artificial reforestation and use of chemical toxicants. The impacts of shelterwood cutting are much less than clearcutting, since only a portion of the total stand is harvested. Shelterwood cutting opens the forest to drying effects of wind and sun thereby increasing fire danger, but to a lesser extent

than clearcutting. Shelterwood cutting can also prepetuate and spread dwarf mistletoe damaging and killing susceptible tree species. This practice opens the forest canopy and allows increased growth of herbaceous and shrub layers in years of poor tree seed production. This impact is favorable to wildlife production but adverse to forest production.

Seed tree cutting usually impacts vegetation much the same as clearcutting. The number of trees remaining after harvesting are generally few in number but provides a good chance for natural regeneration and recovery.

Selective cutting impacts are the least of any harvest practice since a relatively small percent of the forest is harvested in each cutting period. This method usually results in regeneration of less valuable shade tolerant trees and perpetuates dwarf mistletoe as does the shelterwood method.

Seeding and planting which augments nautral reforestation treated with nontoxic repellents, such as thiram, has very little impact on wildlife.

In summary, the impact of restricting the use of chemical toxicants along with more selective, humane and safer methods of control will:

(a) reduce the chances that nontarget, rare and endangered species are taken,

(b) decrease danger to humans through accidental injury or death,

(c) reduce potential environmental degradation resulting from the practice of poisoning,

(d) result in wild animal populations reaching more natural predator/prey relationships,

(e) probably require manpower above the present level being utilized to protect livestock in programs involving trapping, shooting, denning, and other nonpoisoning methods,

(f) require a commitment of manpower to enforce the ban against poisons,

(g) affect small livestock owners currently operating on a narrow economic margin when the use of posion is prohibited, and

(h) effect changes in timber management which foster natural regeneration or planting of seedlings rather than seeding.

IV. Mitigating Measures Included in the Proposed Action:

Adopting regulations that prohibit the use of chemical toxicants as stated is a means in itself of mitigating adverse impacts caused by unrestricted use of chemical toxicants. Certain acceptable practices for controlling predators and rodents will be intensified where conditions warrant.

The elimination of chemical toxicants for predator control on national resource lands can be expected to result in the increased use of trapping, denning, and gunning of predators. It will also increase efforts in research aimed at perfecting more selective practices of animal damage control.

In addition to larger wildlife species, some small mammals, particularly chipmunks and golden-mantled ground squirrels, have aesthetic values which will increase as recreation use of national resource lands intensifies. Extensive studies have not been conducted on beneficial effects of small mammals. But complete, permanent destruction of small mammals in any area would not be beneficial. The proposed regulations in essence recognize the importance of small mammals as a wildlife resource and encourage their management in harmony with other uses on national resource lands.

Mitigating measures of not using chemical toxicants in forest management include increased planting of forest tree seedlings treated with thiram animal repellent. An additional two million two-year-old Douglas fir seedlings will be needed by 1975. Costs will range between $15 to $25

Too low

per acre more than seeding; however, less forest tree seed will be required, thus gaining greater utilization of expensive and scarce genetically superior tree seed. Nontarget animals which are beneficial and necessary to natural ecological systems will be spared.

The proposed regulations prohibit the use of chemical toxicants such as "1080" for rodent baiting; however, clearance has been received for the use of strychnine-salt blocks for porcupine control. To mitigate adverse impacts, blocks are placed in specially designed metal bait stations firmly anchored to logs preventing livestock damage to the station which would expose salt blocks to game animals. Stations constructed from half-round aluminum culverts protect salt blocks from weather thereby reducing leeching. These stations must be checked at least twice a year and removed when porcupine damage to resources or improvements are not evident.

Rodent baiting practices required by emergency conditions will have the proper chemical formulation, carrier, method of application and application rate and be carefully evaluated to minimize the probability of accidental entry of chemical into streams, lakes, marshes and estuaries. Monitoring of streams and bodies of water should be done prior to, during and after application. There are circumstances which mitigate the water quality degrading potential of the chemicals used in aerial baiting for rodents and in the treatment of aerially disseminated seed. Rodent bait and seed are more dense than chemical sprays used in weed and brush control. Consequently, the baits and seeds are much less subject to lateral drift, hence less likely to miss the target area.

V. Adverse Effects Which Cannot be Avoided Should the Proposal be Implemented

Implementation of the proposed regulations may result in some States developing ongoing programs as a substitute for the use of chemical toxicants. From five to 12 Western States may initiate more intensive chemical programs on private and State lands when the program on public lands is discontinued.[32/] Some States will also leave it to private individuals to protect their property against predatory and depredating animals.

The actions of individual livestock owners may have a direct bearing on predator control on public lands depending on ownership patterns. Where ranchers own land interspersed with public lands these private ranches could affect predators on such public lands through control programs instituted and conducted wholly on private lands.

The impact caused by the proposed regulations and the possibility of leaving the use of poisons to private individual and State agencies will depend on action taken by the States and by individuals. Adverse effects on wildlife and possibly on people, can be expected in localized situations where there are no controls over the use of poisons.

Restricting the use of poisons on national resource lands will result in improved conditions for wild animals. However, conditions for livestock, where grazing is permitted, may be less favorable unless the use of other

32/U.S. Department of the Interior, Draft Environmental Statement, Proposed Animal Damage Control Act of 1972, Bureau of Sport Fisheries and Wildlife, February 8, 1972, pg. 30.

methods of control such as trapping, shooting, and denning is increased.

On private lands conditions for wildlife may become adverse if States and private individuals increase the use of poison in an attempt to mitigate for the proposed restrictions on public lands.

A. Wildlife Populations

It has been estimated that poisons accounted for about 80 percent of all predatory animals that were killed annually by the Department's previous program.[33/] The remainder was killed by other methods. Since proposed restrictions will prohibit the field use for killing predatory animals on Federal lands it must be assumed that a significant percent of the predatory animals previously poisoned annually would now survive and may play active roles in rangeland ecosystems and other habitats which they occupy, unless other control methods are intensified.

It is difficult to assess the impact of having additional predators present in the various habitats because it is not known what percent of the total number of predators this represents. Reliable data requires research. If the animals being killed by the poison program include a large percentage that would normally die through attrition from accidents, disease predation, weather, parasites, old age, etc., then the effects on the environment of their added presence would probably be negligible. On the other hand, if significant numbers of predators are being taken at present, reduction in the kill of 80 percent could produce an important impact. These

33/ U.S. Department of the Interior, op cit., p. 41.

additonal animals would likely contribute to increased population levels, and enable the total predator population to respond more completely to prey species levels and contribute to the development of natural interrelationships. Without additional research, it is not possible to ascertain what the impact would be on public lands, or for that matter, on any lands with the presence of increased numbers of predators.

B. Livestock Grazing

Most lands being grazed by livestock are subject to predator control, the intensity of this control is based upon demand. The impact on livestock owners may be an economic one. Any losses of livestock that occur upon implementation of the regulations, i.e., prohibiting the use of poisons for controlling predators, which cannot be offset by the increased use of nonpoison methods, will be part of the price livestock owners pay for the privilege of grazing on public lands.

C. Forest Management

The major cause of forest tree seed loss, approximately 80 percent, is due to both consumption and removal by small mammals. Birds cause minor seed loss, approximately one to three percent, of the total. Other damaging agents include seed lost to insects, trampling by wildlife and domestic stock, hunters and off-road machines account for still other seed loss.[34/]

By not using chemical toxicants for seed protection and rodent control, reforestation activities by seeding will be adversely effected. Losses

34/Graber, Ray. 1969. Seed losses to small mammals after fall sowing of pine seed. Research Paper NE-135, Northeastern Forest Experiment Station, pp. 16.

will be reflected by understocked stands and delayed stocking on national resource forest lands. As a result, timber harvest volumes may be reduced in the future, this in turn would have an adverse effect on lumber and home building industries.

VI. The Relationship Between Local Short-Term Uses of Man's Environment and the Maintenance and Enhancement of Long-Term Productivity

National resource lands are administered for the long-range stewardship of the soil, water, wildlife, and vegetative resources of the Nation. Past predator control programs have been directed more toward short-range accomplishments than long-range benefits. Not enough consideration, economic, social, or biological, has been given to multiple purpose management of natural resources that are affected by the application of chemical toxicants.

The proposed regulations address both immediate and future environmental impacts. In the immediate sense, they recognize that public resources should not be obligated to support regional short-range needs.

There may be a short-range economic burden imposed on some ranchers as a result of the proposed program. More research is needed to determine what the true impact would be on the rancher and what the predator/prey relationships are before the extent of long- and short-term impacts can be thoroughly understood.

The proposed action makes provisions for the demands of other rightful users of the public lands. It represents an attempt to maximize the types of public land uses which are of local character while at the same time providing for mechanisms which assure that long-term values of the public lands are not irreversibly compromised.

Rodent control methods provide only temporary checks on populations in small areas for a short time. However, adoption of the regulations

prohibiting the use of chemical toxicants to control seed eating rodents may result in increased understocked acreage of forest lands. Tree planting will slowly replace tree seeding as nursery facilities increase capacity. In the long run, research efforts will be directed toward development of a nontoxic chemical forest seed protectant.

The elimination of chemical toxicants may increase rodent predators and in the long-term strike an ecological balance. Birds, reptiles and other nontarget animals would be spared. Biological rodent control may offer possibilities for population control in problem areas in the future.

VII. Irreversible and Irretrievable Commitment of Resources

Implementation of this proposal which has in effect been accomplished by Executive Order 11643 will involve neither irreversible nor irretrievable commitment of resources. On the contrary, implementation will reduce the potential for losses of nontarget animals, including predators and endangered species. The destruction of one individual of an endangered species through poisoning would be an incremental increase in the destruction of that species, and a potential irretrievable and irreversible commitment of a resource.

The commitment of rare or endangered wildlife species or other presently unknown scarce national resources to a chemical toxicant program aimed mainly at killing predators and rodents in the West that would not benefit the entire Nation.

VIII. Alternatives to Proposed Action

Alternatives to the proposed regulations include: (1) Cancel Executive Order No. 11643, and continue the use of chemical toxicants to control predators and rodents on national resource lands. (2) Cancel Executive Order No. 11643, and terminate Federal predatory animal damage programs. (3) Complete ban on the use of chemical toxicants.

1. Continues Use of Chemical Toxicants

Selection of this alternative would:

(a) Result in the loss of nontarget and rare and endangered species as well as those species being targeted for control.

(b) Increase safety risks on public lands to humans and pets.

(c) Curtail incentives to develop safer and more selective nonchemical methods which could be used to accomplish the control of these animals when and where necessary.

(d) Probably result in a gradual imporvement in selective taking of predators with chemicals as a result of applied research on chemicals.

(e) Reduce costs of control work and increase productivity of some livestock operations experiencing livestock losses by predators.

(f) Stimulate public pressure to improve methods for selective control.

(g) Public resources would continue to be directed toward supporting short-range needs.

2. Continue the use of Selective Poison

Selection of this alternative would not significantly change the impacts as listed under 1 above. Research on chemical toxicants and the availability

of chemicals for target species only is not selective enough to preclude nontarget species.

3. Cancel Executive Order No. 11643, and Terminate Federal Predatory Animal Damage Control Programs

Upon cancellation of the Executive Order all Federal programs, funding, and research would be totally discontinued. States would assume programs for predatory animal damage control directed toward resident animals which are a responsibility of State government to manage.

(a) Turning the responsibility for direct control of resident wildlife over to the States would provide increased opportunity for public review and decision-making at the State and local level.

(b) Federal funds and manpower would be available for other programs.

(c) Enforcement of Federal responsibility for the management of resources on public lands, including rare and endangered species, may be difficult if irresponsible programs of control are implemented.

(d) Development and implementation of nonchemical methods of control, in addition, to gaining knowledge on predator/prey relationships, and the social and biological values of predators to people and the environment would not be optimized under this decentralized approach.

4. Complete Ban on the Use of Chemical Toxciants

Instituting a complete ban on the use of all chemical toxicants for animal damage control would be an adjunct to the policy established by Executive Order No. 11643 since it would not be restricted to chemical toxicants causing secondary poisoning. The blanket restriction of chemical toxicants would result in increased use of mechanical methods of control. In some

predatory animal control programs such as shown in the Bridger study cited earlier, the mechanical control techniques can effectively protect livestock but at a substantially higher control cost than with chemical toxicants.

However, in rodent control programs the banning of chemicals would bring most control programs to a standstill. For example, rodent control can be accomplished with anticoagulants. Anticoagulants are chemicals which reduce or prevent the clotting of blood when ingested over a period of several days. Death is caused by internal hemorrhaging. Most anticoagulants are safe and effective. They lack significant secondary poisoning hazards to nontarget species. Dephacionone (2-dephenylacety - 1,3,-indandione), the most active per unit weight has promising characteristics as a substitute for other chemical toxicants.

Also zinc phosphide, used at prescribed levels, is a very effective rodent control chemical and the possibility of "secondary poisoning effects" occurring under field conditions is remote.

Without effective rodent control methods damages to man-made earth structures such as reservoirs, ditches and canals would be extensive. Also, rodent consumption of forest tree seeds and range forage seeds in rehabilitation projects would have adverse effects on the results of these projects.

The economic costs resulting from the banning of all chemical control of animal damage would increase significantly and in some cases it could not be accomplished at all.

Nonchemical research would have to be intensified.

IX. Consultation and Coordination with others

This draft was prepared following discussions with and review of working drafts by the Bureau of Sport Fisheries and Wildlife, the Bureau of Reclamation and Forest Service within the Federal Government in addition to consultation with the Bureau of Land Management field personnel.

Comments received on the proposed regulations as published in the Federal Register on March 1, 1972, were considered in development of the draft statement by individuals and organizations outside of the Government.

Appendices

1. Proposed Rule Making
   (43 CFR Part 1720)
   Program Policy
   Placement of Chemical Toxicants on Public Lands

2. Presidential Documents
   Title 3 - The President
   Executive Order 11643
   Environmental Safeguards on Activities for Animal Damage Control on Federal Lands

3. Department of the Interior
   Departmental Manual
   Environmental Quality Part 517 Use of Pesticides

4. Departmental (Interior Guidelines for Use of Poisons In Non-Predatory Animal Damage Control)

5. Sample State Office and District Office forms justifying, requesting and reporting predator control

Appendix I

Proposed Rule Making

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

[43 CFR Part 1720]

PROGRAM POLICY

Placement of Chemical Toxicants on Public Lands

Notice is hereby given that pursuant to the authority contained in R.S. 453, as amended (43 U.S.C. sec. 2); R.S. 2478, as amended (43 U.S.C. sec. 1201), the National Environmental Policy Act of 1969 (42 U.S.C. 4321, 4331-4335); and pursuant to Executive Order 11643 (37 F.R. 2875), it is proposed that Subpart 1725 of Title 43, Code of Federal Regulations, be amended by adding § 1725.3-4.

The purpose of this amendment is to restrict the use on public lands of chemical toxicants for the purpose of killing predatory mammals or birds and to restrict the use on such lands of chemical toxicants which cause any secondary poisoning effects for the purpose of killing other mammals, birds or reptiles.

In accordance with the Department's policy on public participation in rule making (36 F.R. 8336), interested parties may submit written comments, suggestions, or objections with respect to the proposed rules to the Director (210), Bureau of Land Management, Washington, D.C. 20240, until May 1, 1972.

Copies of comments, suggestions, or objections made pursuant to this notice will be available for public inspection in the Office of Information, Bureau of Land Management, Room 5643, Interior Bldg., Washington, D.C., during regular business hours (7:45 a.m.-4:15 p.m.).

Part 1720 of Chapter II, Title 43, Code of Federal Regulations, is amended by adding § 1725.3-4 to read as follows:

§ 1725.3-4 Use of chemical toxicants on public lands.

(a) Except as hereafter provided, the field use of any chemical toxicant which may cause the death of any predatory mammal or bird, or the field use of any chemical toxicant which may cause any secondary poisoning effect to any mammal, bird, or reptile is prohibited on public lands administered by the Bureau of Land Management.

(b) Exceptions: The Secretary may authorize the emergency use of a chemical toxicant for the purpose of killing predatory mammals or birds, or of a chemical toxicant which may cause a secondary poisoning effect to any mammal, bird, or reptile, if in each specific case the Secretary makes a written finding, following consultation with the Secretaries of Agriculture and Health, Education, and Welfare, and the Administrator of the Environmental Protection Agency, that an emergency exists that cannot be dealt with by means which do not involve use of chemical toxicants, and that such use is essential (1) to the protection of the health or safety of human life; (2) to the preservation of one or more wildlife species threatened with extinction, or likely within the foreseeable future to become so threatened; or (3) to the prevention of substantial irretrievable damage to nationally significant natural resources.

(c) Definitions: As used herein the term "field use" means use on any public land except use immediately adjacent to, or inside, occupied buildings; the term "chemical toxicant" means any chemical substance which, when ingested, inhaled, or absorbed, or when applied to or injected into the body, in relatively small amounts, by its chemical action may cause significant bodily malfunction, injury, illness, or death, to animals or man; the term "predatory mammal or bird" means any mammal or bird which habitually preys upon other animals or birds; and the term "secondary poisoning effect" means the result attributable to a chemical toxicant which, after being ingested, inhaled, or absorbed, or when applied to or injected into, a mammal, bird, or reptile, is retained in its tissue, or otherwise retained in such a manner and quantity that the tissue itself or retaining part if thereafter ingested by man, mammal, bird, or reptile, may cause significant bodily malfunction, injury, illness, or death.

MITCHELL MELICH,
Acting Secretary of the Interior.

FEBRUARY 25, 1972.

[FR Doc.72-3661 Filed 2-29-72;8:52 am]

[43 CFR Parts 4110, 4120, 4130]

CONSERVATION OR PROTECTION OF NATURAL RESOURCES OR THE ENVIRONMENT

Proposed License, Permit, and Leasing Procedures; Requirements and Conditions

Notice is hereby given that pursuant to the authority contained in the Act of June 28, 1934 (43 U.S.C. 315a, 315m); the Act of March 4, 1927 (43 U.S.C. 316b); the Act of August 28, 1937 (43 U.S.C. 1181d); the Act of September 1, 1954 (50 Stat. 902); and the National Environmental Policy Act of 1969 (42 U.S.C. 4321, 4331-4335) it is proposed to amend Parts 4110, 4120, and 4130 of Chapter II, Title 43 of the Code of Federal Regulations.

The purpose of this amendment is to make grazing privileges subject to cancellation where a grazer has violated or failed to comply with any Federal or State law or regulation concerning the conservation or protection of natural resources or the environment and (1) grazing administered by the Bureau of Land Management is involved or affected, and (2) such violation or failure to comply is related to a grazing use authorized by said lease, license, or permit.

In accordance with the Department's policy on public participation in rule making (36 F.R. 8336), interested parties may submit written comments, suggestions, or objections with respect to the proposed rules to the Director (210), Bureau of Land Management, Washington, D.C. 20240 until May 1, 1972.

Copies of comments, suggestions, or objections made pursuant to this notice will be available for public inspection in the Office of Information, Bureau of Land Management, Room 5643, Interior Building, Washington, D.C. during regular business hours (7:45 a.m.-4:15 p.m.).

Parts 4110, 4120, 4130, of Subchapter D of Chapter II, Title 43 of the Code of Federal Regulations are amended as follows:

1. A new subparagraph (15) is added to § 4115.2-1(e) of Part 4110 to read as follows:

§ 4115.2-1 License and permit procedures; requirements and conditions.

* * * * * *

(e) * * *

(15) The violation of, or failure to comply with, any Federal or State law or regulation concerning the conservation or protection of natural resources or the environment may result in the cancellation or reduction of a license or permit where (i) grazing land administered by the Bureau of Land Management is involved or affected, and (ii) such violation or failure to comply is related to a grazing use authorized by said license or permit. Laws or regulations relating to the conservation or protection of natural resources or the environment include, but are not limited to, those relating to air and water pollution, protection of wildlife and fish, and the use of pesticides.

* * * * * *

2. A new subparagraph (12) is added to § 4125.1-1(f) of Part 4120 to read as follows:

§ 4125.1-1 Leasing procedures; requirements and conditions.

* * * * * *

(f) * * *

(12) The violation of, or failure to comply with, any Federal or State law or regulation concerning the conservation or protection of natural resources or the environment may result in the cancellation or reduction of a lease where (i) grazing land administered by the Bureau of Land Management is involved or affected, and (ii) such violation or failure to comply is related to a grazing use authorized by said lease. Laws or regulations relating to the conservation or

protection of natural resources or the environment include, but are not limited to, those relating to air and water pollution, protection of wildlife and fish, and the use of pesticides.

* * * * *

3. Paragraph (f) of § 4131.2–7 of Part 4130 is amended by adding a new subparagraph to read as follows:

§ 4131.2–7 Leases.

* * * * *

(f) *Restrictions.*

The violation of, or failure to comply with, any Federal or State law or regulation concerning the conservation or protection of natural resources or the environment may result in the cancellation or reduction of a lease where (i) grazing land administered by the Bureau of Land Management is involved or affected, and (ii) such violation or failure to comply is related to a grazing use authorized by said lease. Laws or regulations relating to the conservation or protection of natural resources or the environment include, but are not limited to, those relating to air and water pollution, protection of wildlife and fish, and the use of pesticides.

* * * * *

MITCHELL MELICH,
Acting Secretary of the Interior.

FEBRUARY 25, 1972.

[FR Doc.72-3060 Filed 2-29-72; 8:52 am]

[43 CFR Parts 4110, 4120, 4130]

USE OF CHEMICALS TOXIC TO PREDATORY ANIMALS ON GRAZING LANDS

Proposed License, Permit, and Leasing Procedures; Requirements and Conditions

Notice is hereby given that pursuant to the authority contained in the Act of June 28, 1934 (43 U.S.C. 315a, 315m); the Act of March 4, 1927 (as amended) (43 U.S.C. Sec. 316b); the Act of August 28, 1937 (43 U.S.C. 1181d); the Act of September 1, 1937 (50 Stat. 902); and the National Environmental Policy Act of 1969 (42 U.S.C. 4321 4335); and pursuant to Executive Order 11643 (37 F.R. 2875), it is proposed to amend Parts 4110, 4120, and 4130 of Chapter II, Title 43 of the Code of Federal Regulations as follows:

The purpose of this amendment is to restrict on public lands administered by the Bureau of Land Management and subject to domestic livestock grazing the use of chemicals toxic to predatory mammals or birds, or toxic to other mammals, birds, and reptiles if such chemical toxicants may cause secondary poisoning effects; and to authorize the cancellation or reduction of grazing privileges for the unauthorized use of such chemicals.

In accordance with the Department's policy on public participation in rule making (36 F.R. 8336) interested parties may submit written comments, suggestions, or objections with respect to the proposed rules to the Director (210), Bureau of Land Management, Washington, D.C. 20240 until May 1, 1972.

Copies of comments, suggestions, or objections made pursuant to this notice will be available for public inspection in the Office of Information, Bureau of Land Management, Room 5641, Interior Building, Washington, D.C., during regular business hours (7:45 a.m.–4:15 p.m.).

Parts 4110, 4120, 4130 of Subchapter D of Chapter II, Title 43 of the Code of Federal Regulations are amended as follows:

1. A new subparagraph (16) is added to § 4115.2–1(e) of Part 4110 to read as follows:

§ 4115.2–1 License and permit procedures; requirements and conditions.

* * * * *

(e) * * *

(16)(i) Except as authorized in writing by the Secretary, no licensee or permittee, or the agent or employee of any licensee or permittee, shall make field use on the public lands of any chemical toxicant which may cause the death of any predatory mammal or bird, or the field use of any chemical toxicant which may cause any secondary poisoning effects to any mammal, bird, or reptile. Any unauthorized use may result in the cancellation or reduction of the grazing use.

(ii) As used herein, the term "field use" means use on any public land except use immediately adjacent to or inside, occupied buildings; the term "chemical toxicant" means any chemical substance which, when ingested, inhaled, or absorbed, or when applied to or injected into the body, in relatively small amounts, by its chemical action may cause significant bodily malfunction, injury, illness, or death, to animals or man; the term "predatory mammal or bird" means any mammal or bird which habitually preys upon other animals or birds; and the term "secondary poisoning effect" means the result attributable to a chemical toxicant which, after being ingested, inhaled, or absorbed, or when applied to or injected into, a mammal, bird, or reptile, is retained in its tissue, or otherwise retained in such a manner and quantity that the tissue itself or retaining part if thereafter ingested by man, mammal, bird, or reptile, may cause significant bodily malfunction, injury, illness or death.

* * * * *

2. A new subparagraph (13) is added to § 4125.1–1(i) of Part 4120 to read as follows:

§ 4125.1–1 Leasing procedures; requirements and conditions.

* * * * *

(i) * * *

(13) Except as authorized in writing by the Secretary, no lessee or the agent or employee of any lessee shall make field use on the public lands of any chemical toxicant which may cause the death of any predatory mammal or bird, or the field use of any chemical toxicant which may cause any secondary poisoning effects to any mammal, bird, or reptile. Any unauthorized use may result in the cancellation or reduction of the grazing use. For definitions of the terms "field use," "chemical toxicant," "predatory mammal or bird," and "secondary poisoning effect," see § 4115.2–1(e)(16)(ii) of this chapter.

* * * * *

3. Paragraph (f) of § 4131.2–7 of Part 4130 is amended by adding a new subparagraph to read as follows:

§ 4131.2–7 Leases.

* * * * *

(f) *Restrictions.* * * *

Except as authorized in writing by the Secretary, no lessee or the agent or employee of any lessee shall make field use on the public lands of any chemical toxicant which may cause the death of any predatory mammal or bird, or the field use of any chemical toxicant which may cause any secondary poisoning effects to any mammal, bird, or reptile. Any unauthorized use may result in the cancellation or reduction of the grazing use. For definitions of the terms "field use," "chemical toxicant," "predatory mammal or bird," and "secondary poisoning effect," see § 4115.2–1(e)(16)(ii) of this chapter.

* * * * *

MITCHELL MELICH,
Acting Secretary of the Interior.

FEBRUARY 25, 1972.

[FR Doc.72-3059 Filed 2-29-72; 8:52 am]

INT: 5507–72

Proposed Rule Making

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

[43 CFR Parts 1720, 4110, 4120, 4130]

RESTRICTIONS ON USE OF PUBLIC LANDS TO CONTROL USAGE OF CHEMICAL TOXICANTS

Extension of Time

On pages 4202 and 4203 of the FEDERAL REGISTER of March 1, 1972, three documents were published which proposed amendments to Parts 1720, 4110, 4120, and 4130 of the Code of Federal Regulations. The proposed amendments would: (1) Restrict the use on public lands of chemical toxicants for the purpose of killing predatory mammals or birds and restrict the use on such lands of chemical toxicants which cause any secondary poisoning effects for the purpose of killing other mammals, birds, or reptiles, (2) make grazing privileges subject to cancellation or reduction where a grazier has under certain conditions violated or failed to comply with any Federal or State law or regulation concerning the conservation or protection of natural resources or the environment, and (3) authorize the cancellation or reduction of grazing privileges on public lands for the unauthorized use of chemicals toxic to predatory mammals or birds, or toxic to other mammals, birds, and reptiles if such chemical toxicants may cause secondary poisoning effects.

Interested persons were given until May 1, 1972, to submit written comments, suggestions, or objections respecting the amendments to the Director (210) Bureau of Land Management, Department of the Interior, 18th and C Streets NW., Washington DC 20240.

The period for submitting written comments, suggestions, or objections, is hereby extended until 45 days after an environmental impact statement regarding the use of chemical toxicants is filed with the Council of Environmental Quality in accordance with section 102 of the National Environmental Quality Act of 1969 (42 U.S.C. 4321, 4331-4335). A public notice on the availability of the statement will be published.

HARRISON LORSCH,
Assistant Secretary of the Interior.

MAY 22, 1972.

[FR Doc.72-8041 Filed 5-26-72;8:45 am]

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Social Security Administration

[20 CFR Part 405]

[Regs. 5]

FEDERAL HEALTH INSURANCE FOR THE AGED

Elections To Receive Reimbursement for Emergency Services and Appeal Rights of Emergency Service Hospitals

Notice is hereby given, pursuant to the Administrative Procedure Act (5 U.S.C. 553) that the amendments to the regulations (20 CFR Part 405) as set forth in tentative form below are proposed by the Commissioner of Social Security, with the approval of the Secretary of Health, Education, and Welfare. The proposed amendments to the regulations would (1) permit qualified hospitals to elect to receive from Medicare at any time before the close of a calendar year reimbursement for emergency hospital services furnished during the year, and (2) provide such hospitals the same administrative review and appeal rights as are applicable in determining whether a facility, agency, etc., is qualified as a provider of services.

Prior to the adoption of the proposed amendments to the regulations, consideration will be given to any data, views, or arguments relating thereto which are submitted in writing in triplicate to the Commissioner of Social Security, Department of Health, Education, and Welfare Building, Fourth and Independence Avenue SW., Washington, DC 20201, within a period of 30 days from the date of publication of this notice in the FEDERAL REGISTER.

The proposed regulations are to be issued under authority contained in sections 1102, 1814(d), 1835(b), 1861(e), 1869, 1871; 49 Stat. 647, as amended, 79 Stat. 286, as amended, 79 Stat. 304, as amended, 79 Stat. 314, as amended, 79 Stat. 330, 79 Stat. 331, 42 U.S.C. 1302, 1395 et seq.

Dated: April 11, 1972.

ROBERT M. BALL,
Commissioner of Social Security.

Approved: May 22, 1972.

ELLIOT L. RICHARDSON,
Secretary of Health, Education, and Welfare.

Regulations No. 5 of the Social Security Administration, as amended (20 CFR Part 405), are further amended as follows:

1. Paragraph (a) of § 405.152 is amended by revising subparagraph (5) to read as follows:

§ 405.152 Payment for services furnished; nonparticipating hospital furnishing emergency services.

(a) Payment (in amounts as determined in accordance with § 405.151) may be made to a hospital even though the hospital is not a participating provider (or, it has not entered into an agreement with the Secretary, pursuant to section 1866 of the Act—see § 405.606) if:

* * * * *

(5) With respect to services furnished in a calendar year beginning after December 31, 1967, the hospital has in effect an election to claim payment for all emergency services furnished in such calendar year (see § 405.658).

* * * * *

2. Section 405.658 is revised to read as follows:

§ 405.658 Emergency hospital services; hospital election to receive health insurance payments.

(a) *General.* A hospital which meets the requirements of section 1861(e) applicable for purposes of sections 1814(d) and 1835(b) of the Act (see § 405.15 (a)(1)) and does not have in effect an agreement with the Secretary to participate in the health insurance program but is furnishing emergency inpatient and outpatient services to individuals entitled to health insurance benefits may elect, pursuant to sections 1814(d) and 1835(b) of the Act, to receive payment under such program for all emergency services furnished in a calendar year after December 31, 1967, by the hospital or under arrangements with the hospital, to entitled individuals *Provided,* that such hospital has not previously charged an individual for other person for emergency hospital services furnished to the individual in such calendar year. The hospital's statement of election must be filed on a form designated by the Social Security Administration.

(b) *Elements of statement of election.* Under the provisions of the statement of election, the hospital agrees for the calendar year of election:

(1) To comply with the provisions of §§ 405.607-405.610 which relate to charges for items and services the h

Presidential Documents

Title 3—The President

EXECUTIVE ORDER 11643

Environmental Safeguards on Activities for Animal Damage Control on Federal Lands

By virtue of the authority vested in me as President of the United States and in furtherance of the purposes and policies of the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.) and the Endangered Species Conservation Act of 1969 (16 U.S.C. 668aa), it is ordered as follows:

SECTION 1. *Policy.* It is the policy of the Federal Government to (1) restrict the use on Federal lands of chemical toxicants for the purpose of killing predatory mammals or birds; (2) restrict the use on such lands of chemical toxicants which cause any secondary poisoning effects for the purpose of killing other mammals, birds, or reptiles; and (3) restrict the use of both such types of toxicants in any Federal programs of mammal or bird damage control that may be authorized by law. All such mammal or bird damage control programs shall be conducted in a manner which contributes to the maintenance of environmental quality, and to the conservation and protection, to the greatest degree possible, of the Nation's wildlife resources, including predatory animals.

SEC. 2. *Definitions.* As used in this order the term:

(a) "Federal lands" means all real property owned by or leased to the Federal Government, excluding (1) lands administered by the Secretary of the Interior pursuant to his trust responsibilities for Indian affairs, and (2) real property located in metropolitan areas.

(b) "Agencies" means the departments, agencies, and establishments of the executive branch of the Federal Government.

(c) "Chemical toxicant" means any chemical substance which, when ingested, inhaled, or absorbed, or when applied to or injected into the body, in relatively small amounts, by its chemical action may cause significant bodily malfunction, injury, illness, or death, to animals or man.

(d) "Predatory mammal or bird" means any mammal or bird which habitually preys upon other animals or birds.

(e) "Secondary poisoning effect" means the result attributable to a chemical toxicant which, after being ingested, inhaled, or absorbed, or when applied to or injected into, a mammal, bird, or reptile, is retained in its tissue, or otherwise retained in such a manner and quantity that the tissue itself or retaining part if thereafter injested by man,

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mammal, bird, or reptile, produces the effects set forth in paragraph (c) of this section.

(f) "Field use" means use on lands not in, or immediately adjacent to, occupied buildings.

SEC. 3. *Restrictions on Use of Chemical Toxicants.*

(a) Heads of agencies shall take such action as is necessary to prevent on any Federal lands under their jurisdiction, or in any Federal program of mammal or bird damage control under their jurisdiction:

(1) the field use of any chemical toxicant for the purpose of killing a predatory mammal or bird; or

(2) the field use of any chemical toxicant which causes any secondary poisoning effect for the purpose of killing mammals, birds, or reptiles.

(b) Notwithstanding the provisions of subsection (a) of this section, the head of any agency may authorize the emergency use on Federal lands under his jurisdiction of a chemical toxicant for the purpose of killing predatory mammals or birds, or of a chemical toxicant which causes a secondary poisoning effect for the purpose of killing other mammals, birds, or reptiles, but only if in each specific case he makes a written finding, following consultation with the Secretaries of the Interior, Agriculture, and Health, Education, and Welfare, and the Administrator of the Environmental Protection Agency, that any emergency exists that cannot be dealt with by means which do not involve use of chemical toxicants, and that such use is essential:

(1) to the protection of the health or safety of human life;

(2) to the preservation of one or more wildlife species threatened with extinction, or likely within the foreseeable future to become so threatened; or

(3) to the prevention of substantial irretrievable damage to nationally significant natural resources.

SEC. 4. *Rules for Implementation of Order.* Heads of agencies shall issue such rules or regulations as may be necessary and appropriate to carry out the provisions and policy of this order.

Richard Nixon

THE WHITE HOUSE,
February 8, 1972.

[FR Doc.72-2042 Filed 2-8-72;12:29 pm]

NOTE: For the text of the President's Environmental Message to the Congress dated February 8, 1972, in which reference is made to E.O. 11643, above, see Weekly Comp. of Pres. Doc., Vol. 8, No. 7, issue of February 14, 1972.

.1 Purpose. The purpose of this part is to prescribe the basic policy regarding the use of pesticides in areas and programs under the jurisdiction of this Department.

.2 Scope. The provisions of this part are applicable to all Bureaus which conduct or finance pesticide programs.

.3 Basic Policy on Use of Pesticides. Certain basic principles are involved in the use of pesticides in areas and programs under the jurisdiction of this Department. These principles are:

A. The Department of Interior has the responsibility of assuring maximum protection to the environment.

B. The Department will use all its means to reduce pollution resulting from pesticide use.

C. It will be the policy of the Department to consider safety and environmental quality as the primary factors in making the decision on whether or not to use a pesticide.

D. In areas and programs under its jurisdiction, it will be the policy of the Department to:

(1) Conform with all provisions of Federal and State pesticide law.

(2) Not to use chemicals on prohibited list. (Appendix 1)

(3) Use chemicals on restricted list (Appendix 2) only when non-chemical techniques have been considered and found to be inadequate; and use can be limited to small scale operations.

(4) Use of any chemical pesticide must be aimed at a specific pest problem and involve minimum strength and frequency of application.

.4 Guidelines for Use of Pesticides.

A. Chemical pesticides should not be used alone when non-chemical or integrated chemical and non-chemical techniques offer an alternative option.

B. No pesticide will be used where there is a basis for belief that:

(1) Water quality will be degraded and

(2) Hazards exist that will unnecessarily threaten fish, wildlife, their food chain or other components of the natural environment.

C. Large scale non-specific applications will not be made of any pesticide.

D. A contingency plan will be developed for all pesticide storage areas to:

(1) Prevent pesticide spills from affecting areas outside of the storage areas,

(2) Take remedial action if the spill extends out from the storage areas,

(3) Formulate disposal methods.

E. Federal, State and Local authorities will be kept informed concerning pesticide research and control programs of interest to them and their views will be solicited and considered when formulating Departmental policy.

F. All applications of pesticides will conform to guidelines and standards of the Pesticides Subcommittee of the Cabinet Committee on the Environment.

G. Technical Assistance. The Federal Water Quality Administration, The Geological Survey and The Fish and Wildlife Service will assist in securing compliance with these guidelines.

H. Responsibility for Review of Pesticide Programs. Each Interior Bureau which conducts or finances pesticide programs will appoint a pesticide representative to coordinate and review their Bureau's programs.

I. Reporting Requirements. All Interior Bureaus and Offices are directed to report any potential or actual contamination of the environment from pesticides to that Interior Bureau having statutory authority or responsibility for the abatement of such pollution. If no Interior agency has such authority or responsibility, the condition will be reported to the Intradepartmental Pesticide Working Committee for the attention of the Secretary.

.1 Composition and Authority. The Departmental Pesticides Working Group composed of members named by each agency (see Appendix 1) are authorized to approve their agencies' pesticide programs that comply with departmental policy, with the exception of those chemicals on the restricted list (Appendix 2, 517 DM 1).

.2 Use of Chemicals on Restricted List. Programs involving the use of chemicals on the restricted list will require review by the Cabinet Subcommittee on Pesticides. Twenty copies of the completed forms (FCPC No. 1 and FCPC No. 2) for these uses should be forwarded to the Executive Secretary of the Working Group of the Pesticide Subcommittee of the Cabinet Committee on the Environment for appropriate action. Agency representatives may be asked to speak on their respective programs before the Program Review Panel of the Subcommittee on Pesticides during the interdepartmental review process.

.3 Questions on Specific Chemicals. Questions of the agency representatives concerning specific chemicals and use patterns should be directed to members of the following advisory group:

Walter W. Dykstra (Chairman) Bureau of Sport Fisheries and Wildlife
Walton H. Durum, Geological Survey
Victor Lambou, Federal Water Quality Administration

.4 Guidance for New or Hazardous Programs. The advisory group will also provide guidance for action to be taken on programs that are not a continuation of previously approved operations, or for which water contamination or hazards to fish, wildlife, and crops may be involved. Unresolved proposals and recommendations will be presented by the advisory group to the Departmental Pesticide Working Group for necessary action.

Use of Pesticides

Appendix 1

Prohibited List

Aldrin
Amitrol
Arsenical Compounds (inorganic)
Azodrin
Bidrin
DDT
DDD (TDE)
2, 4, 5 - T
Dieldrin
Endrin
Heptachlor
Lindane
Mercurial Compounds
Strobane
Thallium Sulfate
Toxaphene

Appendix 2

Restricted List

Aramite
Arsenical compounds (organic)
Azinphosmethyl (Guthion)
Benzene hexachloride
Carbophenothion (Trithion)
Chlordane
Coumaphos
Cyanide compounds
Demeton
Diazinon
Dioxathion
Diquat
Disulfoton (Di-syston)
DN compounds such as dinitrocresol
Dursban
Endosulfan
EPN
Ethion
Kepone
Methyl parathion
Mevinphos (Phosdrin)
Mirex
Nicotine compounds
Paraquat
Parathion
Phorate (Thimet)
Phosphamidon
Picloram
Sodium monofluoracetate (1080)
Temik
TEPP
Zectran

Appendix 4

DEPARTMENTAL GUIDELINES FOR USE OF POISONS IN NON-PREDATORY ANIMAL DAMAGE CONTROL

The purpose of this guideline is to specify chemicals permitted and conditions under which they may be used when controlling damage caused by non-predatory mammals, birds, and reptiles on Interior Department lands or in programs under Interior Department jurisdiction in compliance with Executive Order No. 11643.

The stated policy of Executive Order No. 11643, "Environmental Safeguards on Activities for Animal Damage Control on Federal Lands," provides specific restrictions on the use "...of chemical toxicants which cause any secondary poisoning effects for the purpose of killing...mammals, birds, or reptiles...." Further, the policy clearly states that all mammal and bird damage control programs "...shall be conducted in a manner which contributes to the maintenance of environmental quality, and to the conservation and protection, to the greatest degree possible, of the Nation's wildlife resource...."

Secondary Poisoning Effect Resulting From Field Use

By Executive order definition, a "secondary poisoning effect" occurs when a chemical toxicant is retained in a target animal in such a manner and quantity that its chemical action will cause significant bodily malfunction, injury, illness or death to non-target animals or to man when the body part retaining the chemical in question is ingested.

It is clear that the degree of toxicity of a chemical varies in accordance with its respective chemical and physical properties and with the amount and manner of its use. The degree of secondary poisoning effect caused by such toxicants will vary similarly. It is evident that some toxicants will have a "secondary poisoning effect" only as a result of gross application and consequent accumulation in the target species. Accordingly, if these toxicants are not used in such gross amounts it is permissible to use them for the control of non-predatory, depredating mammals and birds. Thus, it is within the intent of Executive Order No. 11643 that determination of a "secondary poisoning effect" must allow for consideration of amounts and methods of actual field use as well as the toxicological properties of the chemicals in question (CF, 50 Am. Jr. Statutes, 378, 382).

In summary, toxicants which have a theoretical secondary poisoning effect may be used if, in practical application, toxic concentration, bait materials, and methods of application are so controlled as to prevent adverse secondary effects to man and non-target populations.

Authorization Procedure

Since this interpretation of Executive Order No. 11643 relies heavily upon applying practical secondary poisoning effect data to field situations, it is necessary to consider use of permitted toxicants in the light of specific patterns of use and to base decisions for using these materials on sound ecological knowledge of specific habitats. Standard dose-weight pharmacology toxicity estimates should be considered as they relate to the target organism as well as to carrion feeders that can be expected to share its habitat. Since secondary poisoning hazard will vary with specific field conditions, agency directors will be responsible for assuring that adverse secondary effects to man and non-target populations will not result from field patterns of use, that such uses comply with Federal and State pesticide use regulations, and that programs proposing use of chemical toxicants are submitted as appropriate for review and approval by the Federal Working Group on Pest Management.

Toxicants Permitted for Non-Predatory Mammal and Bird Control

Only the following chemical toxicants may be used within the context of these guidelines:

(1) Non-predatory mammal control baits--baits treated with strychnine alkaloid or zinc phosphide may be used for controlling non-predatory mammal damage. Potential for secondary poisoning effects from normal uses of these toxicants are related to remnant amounts of the toxicant not degraded in the gastro-intestinal tract prior to death of the target individual and are not associated with other body parts. Since baits are treated at the lowest concentration effective against target animals, the possibility of "secondary poisoning effects" occurring under field conditions is remote. However, if there is reasonable doubt as to secondary poisoning hazard, use will not be made.

(2) Bird control baits--Secondary poisoning effect tests conducted with Avitrol 200* (4-aminopyridine) and Starlicide* (3-chloro-p-toluidine hydrochloride) indicate no potential for this effect.

(3) Burrow fumigants--These fumigants include cyanide compounds, carbon bisulfide, methyl bromide, and chloropicrin. These chemicals are generally considered to have no secondary poisoning effect and since use is restricted to underground situations, the likelihood of contact with carrion feeders is remote.

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* Tradenames (No common chemical names)

(4) Suffocating cartridges--These devices, when ignited and inserted into closed burrows, remove available oxygen and result in suffocation of target species. Secondary poisoning effects are not possible under these conditions.

Non-Field Use

The Executive order restrictions apply only to "field use" of chemical toxicants. "Field use" applies only to controlling damage caused by non-commensal mammals, birds, and reptiles. The order does not apply to urban bird and rodent control programs for residential, industrial, and urban facilities, including garbage dumps, communication facilities, etc.; the order does not restrict the type of chemical toxicants that can be used in these situations.

APPROVED: MAY 23, 1972

Appendix 5

PREDATOR LOSS STATEMENT

Date_____

To: District Manager

_____

_____

_____

The purpose of this letter is to notify you that I am experiencing some problems which are caused by predatory animals. I hold a grazing permit on the _____ BLM District _____ allotment.

I request your prompt attention to this matter and whatever assistance is available to reduce or eliminate the problem.

To aid you in an understanding of my needs, I have recorded below some of the details. I will be pleased to provide any additional information which I have that is related to the problem.

Livestock Lost: Number_____ Type_____ Value _____ Area_____

Predator Responsible for Loss: _____

Date(s) of Loss: _____

Past History of Losses in This Area: _____

_____

_____

_____

Predator Problems Other Than Direct Death Loss: _____

_____

Signed_____

Address_____

Telephone_____

N-04-6830 -1
9/72

ELY BLM DISTRICT
REQUEST AND JUSTIFICATION FOR
PREDATOR CONTROL

_____
Date

Request submitted by _____

Reason for control _____

_____

_____

_____

BSF&W Investigation & Comment

_____

_____

_____

_____

_____
Representative

Review & Comment by Nevada Dept. of Fish & Game

_____

_____

_____

_____

_____
Representative

Recommendation of BLM

_____

_____

_____

_____

_____
Wildlife Specialist

Concurred _____ Area Manager

Approved/Denied for Control _____
District Manager

Where damage justifies immediate control, the District Manager may obtain comment of BSF&W and the Nevada Department of Fish and Game by telephone call. This record is to be completed by District BLM Office.

Copies of the completed form are to be mailed to each of the participants for their record.

...endix B

District _____

Fiscal Year _____

Annual Report of Domestic Livestock Lost to Predators

Livestock Operator	Livestock Reported/Confirmed Lost						Approx. Dates of Loss	Area where livestock killed	Comments
	Reported[1]			Confirmed[2]					
	No.	Class[3]	Predator	No.	Class	Predator			

1. Includes all livestock reported killed by predators by livestock operator, herder, or agency personnel.
2. Losses confirmed by DWS, BLM, or UDWR.
3. Sheep, cows, pigs, etc.